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Every team member influences client compliance for dentistry. Compliance for professional dental cleanings in dogs and cats with Grade 2 dental disease or higher is 35%, according to The Path to High-Quality Care: Practical Tips for Improving Compliance, a 2003 study by the American Animal Hospital Association and Hill’s Pet Nutrition. If only a third of pets get their teeth cleaned but 80% have dental disease, you can quickly spot the potential for your practice. Here are techniques your team can use to enhance patient care and practice income.

Strategies for Receptionists

Create a dental bulletin board. As a veterinary consultant, I often see bulletin boards cluttered with lost or “for sale” pet notices. Instead, put flyers in a 3-ring notebook. Reserve your bulletin board as premium real estate for client education, and change topics monthly. For a dental-themed bulletin board, display before-and-after pictures of a professional dental cleaning along with facts such as “28% of cats develop painful resorptive lesions during their lifetime,” or “Indications of oral disease include bad breath, a change in eating or chewing habits, pawing at the face or mouth, and depression.” (Continues)
Put footers on invoices. Veterinary software allows messages to be printed at the bottom of invoices. A dental message might say, “Besides bad breath, dental disease can cause bacterial infection that destroys gums and teeth and causes bone loss. Ask us about a professional dental cleaning to freshen your pet’s breath, prevent disease, and increase longevity.”

Hang posters in the lobby. Pharmaceutical and pet food representatives can provide brochures and client-education tools.

Create a “dental cleaning recommended” code. Add a section to your travel sheet of common recommendations that need follow-up, such as “dental cleaning recommended,” “weight loss recommended,” or “senior screen recommended.” If the client doesn’t schedule the procedure at checkout, the receptionist enters the “dental cleaning recommended” code. Set up these codes in your veterinary software to trigger a callback in 1 week. The receptionist might call and say, “The doctor asked me to call you about scheduling Ginger’s dental cleaning so we can treat and slow the progression of her dental disease. When would be a convenient time for you...

Reserve your bulletin board as premium real estate for client education and change topics monthly.

Dental Training Resources

- The Academy of Veterinary Dental Technicians offers credentialed training in dentistry at www.avdt.us
- Virbac hosts C.E.T. University, an online course to become a certified dental counselor at www.cetuniversity.com
- Visit www.idexxlearningcenter.com for a course on building feline dentistry
- The Pets Need Dental Care, Too! site at www.petdental.com offers downloadable materials, tips for in-hospital promotions, and client handouts.
- American Veterinary Dental Society membership is open to anyone with an interest in veterinary dentistry. Call 800 332-AVDS or visit www.avds-online.org
- The Journal of Veterinary Dentistry at www.jvdonline.org is the official publication of the American Veterinary Dental Society, Academy of Veterinary Dentistry, and the American Veterinary Dental College.
to schedule? I have an opening on Friday or Monday.” Always direct the client to a possible appointment time because you’ll increase the likelihood he or she will say yes.

*Create reminders for dentistry.* Set an automatic reminder for your invoice code for a professional dental cleaning. A future reminder is generated when a client whose pet had a dental cleaning checks out.

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**Strategies for Technicians**

Assign a grade to dental disease. The technician should note in the medical record whether the patient has Grade 1, 2, 3, or 4 periodontal disease. Then the doctor can recommend needed dental cleanings and track treatment the client accepted or declined. By consistently assigning a grade of dental disease, you’ll increase clients’ understanding and generate more dental cleanings.

*Use dental models.* Keep dental models in exam rooms—not in the pharmacy or doctors’ offices where they only collect dust. You won’t consistently use dental models when talking with clients if you have to fetch a model each time you need it. If you have 3 exam rooms, you need 3 dental models.

*Create a dental picture book.* When presenting treatment plans (formerly called estimates) to clients, use a picture book to help them understand the procedure. Take photos of each step of a professional dental cleaning, from a picture of a technician running preanesthetic blood tests in your in-clinic lab to scaling and polishing. Label and laminate photos and organize them in a 3-ring binder. Place notebooks in exam rooms and the reception area.

*Take digital photos.* When you see a disgusting mouth, photograph it in the exam room. Print and staple the image to the treatment plan. If the client says “I need to check with

(Continues)
my husband first,” the image educates family members about why a dental cleaning is necessary. Keep a duplicate photo in the pet’s medical record. If the client does not accept the dental cleaning, take another picture during the next visit to compare the disease progression.

Also take before-and-after pictures of professional dental cleanings. When photographing pets under anesthesia, take a close-up of the mouth and teeth only, avoiding glassy-eyed animals under anesthesia that may frighten some clients. Pictures let clients see the impressive results of preventive care.

Schedule a recheck a week after a dental cleaning. During this technician appointment, the staff member checks extraction sites for healing and demonstrates home-care products such as a pet toothbrush and toothpaste, rinses, gels, diets, and drinking water additives.

When receptionists and technicians take a collaborative team approach to promoting dentistry, your patients and practice will benefit. At your next team meeting, discuss which of these strategies you plan to implement.

Wendy S. Myers is the owner of Communication Solutions for Veterinarians in Denver, Colorado. She provides consulting services on client service, hospital management, and marketing and is the author of The Veterinary Practice Management Resource Book & CD and other books. Contact her at 720 344-2347 or visit www.csvets.com.

“ If you have 3 exam rooms, you need 3 dental models.”

For the Entire Team

Use this issue of theTeam magazine as a guide for a practice staff meeting. Assign members to review articles discussed in theTeam, develop practice goals for dental compliance, and implement an incentive program tied to agreed-upon compliance goals.
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Canine DENTAL DD 20™ is nutritionally complete and balanced for adult dogs over 25 pounds. Glucosamine and chondroitin help to promote joint health and a balanced blend of fibers optimizes digestibility for larger dogs.
Feline lymphocytic plasmacytic gingivostomatitis (LPGS) is a painful, chronic, inflammatory disease that affects the gum and soft tissue adjacent to the teeth and the caudal oral cavity or pharynx (Figures 1 and 2). Early recognition and aggressive surgical therapy are the most effective means of managing this devastating disease.

**Recognizing LPGS**

Bilateral reddened and inflamed tissue adjacent to the premolar and molar teeth is the hallmark of LPGS. Many cats will also have the same proliferative inflammation present in the mucosal tissue in the caudal pharynx. The condition is always painful.

Clinical signs include:

- Halitosis
- Red gums
- Difficulty swallowing
- Anorexia
- Lethargy
- Blood-tinged saliva
- Dropping food
- Weight loss
- Ptyalism
- Abnormal tongue movements
- Teeth grinding
- Unkempt hair coat due to lack of self-grooming.

Clients should be advised to be alert for these signs and educated on the importance of biannual dental examinations.

The cause of LPGS is unknown. Viruses, such as herpes and more specifically, calicivirus, have been implicated. Regardless of the cause, the immune system response appears to be at least partially responsible for causing the inflammation and pain involved in this disease.

**Take-Home Points**

- LPGS is always painful.
- The cause of LPGS is not known, but the immune system appears to play a role.
- The only treatment shown to provide significant results is caudal mouth extractions.
- Pain management is paramount for minimizing postoperative care.
- Clients need to be made aware that not all cats respond to treatment.

**Treatment Options**

Immune suppression with injectable corticosteroids has been used historically to manage LPGS. However, on a long-term basis, this approach has proven less than adequate. Injections eventually lose their efficacy, and side effects can be significant. Gold salts, topical bovine lactoferrin, thalidomide, plaque control, laser therapy, and numerous other medical therapies have been tried alone and in combination but do not consistently or effectively control the disease.

The only therapy that provides significant results in resolving LPGS is caudal mouth extractions. Medical management should be
Early recognition and aggressive surgical therapy are the most effective means of managing LPGS.

reserved for patients that do not respond to surgical extractions or for those whose owners refuse definitive care. One study showed that 80% of cats that have molars and premolars extracted require no further treatment. Most of the remaining cats require some form of medical therapy, but less than before the extractions. A few cats will require the same amount of medical therapy as before the extractions.

Pain Management

Preparation is key for the veterinary team to properly manage a cat with LPGS. Proper screening and pain management before extraction are paramount in minimizing postoperative care. Intravenous constant-rate infusion of opiates and the NMDA (N-methyl d-aspartate) receptor antagonist, ketamine, combined with a nonsteroidal antiinflammatory drug if indicated before surgery, has been extremely effective in the author’s practice. Full-mouth dental radiography before and after extraction is necessary. Special care is needed to ensure that all parts of the tooth structure are removed and that the alveolus is debrided to remove all dental and periodontal tissue. Pain management is continued for 4 to 7 days after surgery. Practices not equipped to provide this level of care should consider referral to a board-certified veterinary dentist.

The only therapy that has been shown to provide significant results in resolving LPGS is caudal mouth extractions, which is the treatment of choice at this time.

Educate the Client

Client education on LPGS is crucial before therapy is begun. Owners should understand that caudal mouth extraction is the best option for resolution; however, they must be aware that not all cats respond to this therapy. They should also know that doing nothing is not an option—the condition is very painful, and the patient should not be subjected to life without effective therapy.

Reference


Veterinarians who have not been trained to perform flap-based surgical extractions but wish to develop the skills to provide this level of care have options for continuing education. Visit these sites for information:

Veterinary Dental Forum
http://veterinarydentalforum.com

Veterinary Dental Education Center
www.veterinarydentistry.net

Dental CE around the country
http://veterinarydentalforum.com/calendar.cfm

Figure 1. The back portion of the oral cavity behind the teeth is severely inflamed in this cat with stomatitis.

Figure 2. Severe stomatitis in a cat. It should be noted that cats experience pain well before this state is reached. Most cats do not have changes this severe.
As dental radiology has gained acceptance in the veterinary community as an essential part of the oral exam, more clinics are adding this service to their dental procedures. If your practice has not yet added a dental x-ray unit, it is possible to obtain the essential radiographic information using a standard x-ray machine. This article will discuss proper patient positioning using either a standard or dental x-ray unit.

**Preparation**

It is important to relay to your clients that general anesthesia is necessary when taking dental radiographs. Most patients will not lie still or tolerate holding a film in their mouth. Another consideration is the risk for exposure to the handler of keeping the patient and/or the film in place.

**Taking the Image**

**Standard X-Ray Considerations**

A standard x-ray unit using a tabletop technique can be used with either regular film or 4D-speed dental x-ray film. You will need a portable anesthesia machine to move the patient from the procedure table to the x-ray room. Other supplies needed are a foam wedge, an appropriate-sized syringe or a syringe case with the ends cut off to make a mouth gag, and an x-ray cassette (with or without an intensifying screen).

**Figure 1.** A tiger is positioned for a rostral mandibular x-ray using a standard unit. Note how the corner of the cassette (covered with plastic to protect it from being scratched) is inserted to allow more of the mouth to be radiographed.

**Figure 2.** Positioning for a maxillary x-ray using a standard unit.
**Film Placement**

Place the film extraorally for premolars and molars and intraorally for rostral views of the incisors and canine teeth. For rostral views you may need to place the corner of the film or cassette in the mouth first (Figure 1). It can be helpful to have a technician gown up and help hold the film in place when using a cassette.

**Head Positioning**

Tie the endotracheal tube to the jaw that is not being radiographed to ensure it is not in the image field, making certain the tube is secure and the cuff inflated. Place the patient in lateral recumbency and slide the wedge under the head with the target area next to the film. The purpose of the wedge is to avoid superimposition by the contralateral teeth and to get images of both the crowns and the roots. To start, lift the head to about a 45º angle. Attach the syringe or syringe case to the upper and lower canines, being careful not to put too much tension on the jaw. When shooting the maxilla, place the upper jaw next to the film and raise the mandible (Figure 2). When shooting the mandible, place the mandible next to the film and raise the maxilla (Figure 3). Adjust the focal film distance to 16 inches and collimate the beam to the size of the target area.

It is important to note that the image obtained using a standard x-ray unit will not be an exact replication—some magnification and/or blurriness may occur.

**Projection Geometry**

An animal’s flat hard palate (as opposed to our vaulted hard palate) makes it more difficult to radiograph an animal’s maxillary cheek teeth, rostral mandible, and maxilla than a human’s because the film must be angled to achieve the most accurate representation of the tooth’s image, using either a bisecting angle or parallel technique. The goal when positioning a dental radiograph is to get an image with enough detail to be able to identify the dental structures. You don’t want an image that is too short or elongated.

**Bisecting Angle Technique**

Picture yourself standing in a field. At noon, your shadow will be shorter than your actual height and at sunset it will be longer. Midway between noon and sunset, your shadow will be approximately the same length as your actual height. This is the principle behind bisecting angle technique. If you shoot over the top of the head, your image will be too short (stubby roots). If you shoot at the side of the face, your image will be elongated (jellyfish tentacles). If you shoot halfway between the top of the head and the side of

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**Key Points**

- Dental radiology is an essential part of the oral exam.
- It is possible to obtain dental x-ray images using a standard x-ray machine.
- When using a dental x-ray unit the two positioning techniques used are bisecting angle and parallel.
- Taking quality dental x-rays takes practice. Provide in-house training.
the face, your image will be a fairly accurate representation of the tooth's size.

You need two pieces of information to determine the bisecting angle: (1) the plane of the x-ray film, and (2) the long axis of the tooth. The line that equally divides the angle where the tooth meets the film is the bisecting angle. The x-ray beam is then aligned so that it is perpendicular to the bisection line. Another way to look at it is that the edge of your x-ray cone should be parallel to the bisection line (Figure 4).

**Parallel Technique**
Due to the soft tissue that lies between the two sides of the mandible, dental film can be placed directly behind the tooth and roots. The edge of the x-ray cone is aligned parallel with the film (Figure 5).

**Special Considerations for 3-Rooted Teeth**
Because the upper fourth premolar has 3 roots, 2 of which superimpose on each other in a lateral view (the buccal and palatal roots), it is necessary to oblique the target angle, either mesial to distal or the reverse. This technique is used to identify the 2 front roots of the upper fourth premolar on a radiograph. It is necessary to be able to see all 3 three for an accurate diagnosis (Figure 6).

**Practice, Practice, Practice**
Dental radiography is a valuable and marketable skill for the technician but it does take perseverance and patience. Buy a box of film just to practice with. Make it an in-house training for all staff members to learn using dog and cat skulls.

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**NEXT ISSUE:**
Focus on Parasites and Dermatology

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**Jorgensen Laboratories, Inc.**
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Client Talking Points

- What is the owner’s attitude toward dental care in general?
- How does the owner understand the problem?
- Is the owner concerned about the prospect of routinely anesthetizing the pet?
- What are the owner’s financial capabilities?
- What does the owner expect from the treatment?
- What is the owner physically able to do with their pet?
- Is the pet likely to cooperate with the home care?
- Does the pet have a lifestyle that requires the use of the mouth aside from eating?
- Does the pet have a medical condition that would warrant one treatment over another?
- What treats and diet does the pet readily eat?
- Are there other pets in the household?

Jeanne Perrone, CVT, VTS (Dentistry) of Tampa Bay Veterinary Specialists is available in the Tampa Bay area to provide onsite consultation and training in dental radiology, scaling and polishing, sharpening, and equipment. Perrone has 16 years’ experience as a veterinary technician, specializing in veterinary dentistry. She also serves as the president of the Academy of Veterinary Dental Technicians and is an adjunct instructor in the veterinary technology bachelor’s degree program at St. Petersburg College. Contact her at 727-535-3500.

Jeanne Perrone, CVT, VTS (Dentistry)
Do you know the saying, “The cobbler’s children have no shoes”? This story fits that theme; just replace the cobbler with me, a veterinary dentist, and the shoeless progeny with my faithful companion, Belle, an 11-year-old terrier mix.

About 5 months ago, I noticed a fracture in Belle’s mandibular left canine tooth just above the gingival margin. Years ago, Belle suffered from terrible separation anxiety that led her to wear down the distal aspects of her mandibular canine teeth unsuccessfully trying to “Houdini” her way out of her crate. We eventually stopped crating her, but the damage to her teeth had been done. It was unfortunate, but now I would have to extract the tooth or perform endodontic therapy.

Treatment Delay
I’m not sure how Belle broke her tooth, but it was fractured at a level that made pulp involvement seem inevitable. While I had every intention to fix it within a week, other, seemingly more pressing, issues came up. I continued to check her tooth every few days to make sure it had not miraculously cured itself.

Three or 4 weeks passed. I wondered whether the pulp tissue had become necrotic and if Belle would show signs suggestive of periapical inflammation when I got around to radiographing the tooth. A few days later I noticed a new problem: Belle was mildly lame in her left rear leg, not surprising considering she had anterior cruciate repair on her right leg a year earlier.

More Problems
I took Belle to see Dr. Matt Oakes, a veterinary surgeon in our practice. He sedated Belle and palpated her knee. No drawer sign, but there was a significant amount of swelling within the joint capsule; after fine-needle aspiration and cytology he diagnosed inflammatory arthritis. Belle responded nicely to a nonsteroidal antiinflammatory and antibiotics for 14 days, but within 2 weeks of completing the medication Belle was lame again, only this time she seemed arthritic in the front legs as well as the rear.

We went back to Dr. Oakes and this time her joint fluid culture and cytology were negative. Belle appeared to have an immune-mediated arthritic reaction, which we treated with an immunosuppressive followed by decreasing doses of prednisone for 12 weeks. She responded quickly.

When Matt asked what could have started her trouble, I sheepishly admitted I had not addressed Belle’s broken tooth right away. We may never know whether the tooth had been the source of an infection or had stimulated an immune reaction—there have been reports of postextraction sepsis as well as bacteremia associated with mechanical scaling—but I sure felt bad.

The Cobbler Gets to Work
I waited for the immunosuppressive effects of the medication to subside. As soon as Belle was on an alternating dose of medication, I anesthetized her and radiographed the tooth and found an area of radiolucency at the apex of the fractured tooth.

Three or 4 months later, I was surprised to see an area of sequestration filling the fracture. Although I had no way to know it, I suspected that the tooth had been the source of the infection or had stimulated the immune reaction that had started Belle’s trouble.

I still feel bad about not addressing the tooth right away, but I do feel better about getting it fixed now.
Key Points

- Fractured teeth with pulp exposures can be a source of infection.
- Chronic dental infection may have systemic ramifications.
- The release of chronic inflammatory mediators may also play a role in increasing the incidence or severity of systemic disease.
- Ignoring potential causes of chronic infection or chronic inflammation can be detrimental to our patients.

Client Talking Points

- Does your pet have any broken teeth with possible pulp infection?
- Does your dog have bad breath, red gums, bleeding gums, and/or tartar buildup on the teeth?
- Has it been more than a year since your pet had a thorough oral exam, periodontal probing, and charting of dental disease?

1. According to AAHA, what percentage of pets with Grade 2 or higher dental disease actually get their teeth cleaned?
   a) 25%
   b) 30%
   c) 35%
   d) 40%

2. What is one way the receptionist can increase the likelihood of a client scheduling an appointment to have a pet’s teeth cleaned?
   a) Be certain to make the client feel guilty for the state of the pet’s teeth.
   b) Ask to schedule when the client checks out, but do not continue to bother the client with phone calls if he or she declines.
   c) Direct the client to a possible appointment time that is free.
   d) None of the above

3. Which statement is NOT true?
   a) Dental models should be kept in the pharmacy to show to clients.
   b) A dental picture book showing the steps of a dental cleaning can be a useful client education tool.
   c) Consistently assigning grades for dental disease will help increase clients’ understanding.
   d) Pictures taken before and after dental cleaning help clients see the impressive results of proper dental care.

4. The only therapy shown to provide significant results in treating feline lymphohypocytic plasmacytic gingivostomatitis (LPGS) is:
   a) injectable steroids.
   b) laser therapy.
   c) gold salts.
   d) caudal mouth extractions

5. Broken teeth can result in:
   a) pulp exposure.
   b) chronic infection.
   c) pain.
   d) None of the above

6. Which statement about LPGS is true?
   a) It is caused by a calicivirus.
   b) Caudal mouth extractions will resolve all cases.
   c) It is always a painful disease.
   d) One option to give clients is “benign neglect.”

7. When it comes to taking dental x-rays:
   a) clients need to know that general anesthesia will be necessary.
   b) a standard or dental x-ray unit may be used.
   c) providing quality films will take practice.
   d) All of the above

8. Using the bisecting angle technique for dental x-rays:
   a) The long axis of the tooth being filmed is not important.
   b) The x-ray beam is aligned perpendicular to the bisection line.
   c) The resulting image will result in the roots appearing stubby.
   d) None of the above.

9. Broken teeth can result in:
   a) pulp exposure.
   b) chronic infection.
   c) pain.
   d) All of the above

10. Chronic tooth root infection:
    a) can be slowly debilitating.
    b) will not result in systemic consequences.
    c) can usually wait for treatment decisions to be made.
    d) (a) and (c)

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